UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

    4a) Of the above claim(s) *14-18,20-24 and 29-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,19,25-28 and 34-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This final Office action is responsive to Applicant's amendment filed March 31,

2008.

        Claims 36-40 have been added.

        Claims 1-13, 19, 25-28, and 34-40 are presented for examination. Non-elected

claims 14-18, 20-24, and 29-33 stand as withdrawn.

Response to Arguments

2.   Applicant's arguments filed March 31, 2008 have been fully considered but they

are not persuasive.

        Applicant argues that, unlike the claimed invention, Schulz makes purchases

without regard for possible tax implications, yet Applicant also states, "Separate and

distinct from the rebalancing process 'each selected account is also evaluated for

purposes of harvesting tax losses.'" (Page 10 of Applicant's response) The Examiner

submits that Applicant's claimed invention does not requires that every single

transaction performed in regard to a portfolio be carefully analyzed for tax implications.

The scope of the claimed invention allows for certain transactions to be conducted with

regard to desired tax benefits. Similarly, by Applicant's own admission, Schulz is

concerned with at least periodically rebalancing portfolios to maximize tax benefits (col.

2, lines 46-65; col. 5, lines 1-58). In col. 2, lines 46-65, Schulz states, "For each tax lot,

the difference between the present market value of the security and a past historical

value of the security is calculated and compared to a predetermined tax loss threshold.

If the difference meets or exceeds the tax loss threshold, the security is automatically

sold to provide tax losses for offsetting gains in the portfolio." The decision to sell a

security (which is a proposed transaction) may be effected only if such a sale is

determined necessary to offset gains in the portfolio. Therefore, the Examiner

maintains that Schulz's teachings are relevant to the claimed invention.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 1-13, 19, 25, and 36-37 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

Claim 1 recites details of a "portfolio optimizer." It is not clear what the metes

and bounds of the "portfolio optimizer" are. Is it limited to software, hardware, or

software executed by hardware? Applicant is reminded that apparatus claims are

defined by structural elements and their corresponding functionality. The dependent

claims (claims 2-13, 19, 35, and 36-37) fail to remedy the questions regarding scope of

the "portfolio optimizer"; therefore, the same rejections apply. It is also noted that

dependent claims 6 and 7 specify that the portfolio optimizer includes means for

modeling a tax code. Since an interpretation of the "means for modeling a tax code"

under 35 U.S.C. 112, 6th paragraph would suggest that these means are a computer

programmed with software for modeling a tax code (in light of Applicant's specification),

it is implied that the portfolio optimizer also comprises at least a computer programmed

with software. However, a broad, yet reasonable interpretation of an "optimizer" could

merely require software, thereby adding to the confusion of the true metes and bounds

of the recited portfolio optimizer.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-13, 19, 25-28, and 34-35 are rejected under 35 U.S.C. 102(e) as being

anticipated by Schulz et al. (U.S. Patent No. 6,687,681).

Schulz discloses an apparatus allowing for tax-optimized, managed investment

portfolios, the apparatus comprising:

[Claim 1]   an investor account database storing account data for a plurality of

financial portfolios (col. 8, lines 18-61) wherein the assets of each financial portfolio are

allocated to at least one investment style (col. 3, line 57 through col. 4, line 51; col. 5,

lines 10-13 – Each investor has multiple accounts, some of which are utilized for tax

loss harvesting);

a data pre-processor for receiving (i) historical transactions associated with each financial portfolio, and (ii) proposed transactions based on the at least one investment style (col. 2, lines 46-65; col. 4, lines 31-51; col. 5, lines 1-58); and

a portfolio optimizer operative to optimize after-tax returns for each financial portfolio, factoring in risk, return, and total tax costs associated with execution of the proposed transactions and the historical transactions associated with each financial portfolio (col. 2, lines 46-65 – "For each tax lot, the difference between the present market value of the security and a past historical value of the security is calculated and compared to a predetermined tax loss threshold. If the difference meets or exceeds the tax loss threshold, the security is automatically sold to provide tax losses for offsetting gains in the portfolio"; col. 3, line 57 through col. 4, line 51; Diversification and tax loss harvesting are utilized to maximize returns while minimizing tax loss, as seen in col. 2, lines 12-25, 60-64 and col. 4, lines 23-30. Schulz explains in col. 1, lines 11-23 that diversification involves minimizing risk while pursuing returns);

[Claim 2]   wherein the investment style represents a model portfolio (col. 2, lines 35-65; col. 4, lines 4-30; col. 5, lines 31-49; col. 6, lines 4-14);

[Claim 3]   wherein the investment style allows for creation of a model portfolio (col. 2, lines 35-65; col. 4, lines 4-30; col. 5, lines 31-49; col. 6, lines 4-14);

[Claim 4]   wherein the model portfolio data comprises a plurality of securities and their respective weights (col. 2, lines 35-65; col. 4, lines 4-30; col. 5, lines 31-49; col. 6, lines 4-14);

[Claim 5]   wherein the portfolio optimizer is operative to minimize tracking error from

the model portfolios of the at least one investment style associated with the financial

portfolio, balancing tracking error, tax costs, and transaction costs (col. 5, lines 10-57;

col. 6, lines 4-30);

[Claim 6]   wherein the portfolio optimizer includes means for modeling a tax code

applicable to the client associated with each financial portfolio (col. 2, lines 46-65 – "For

each tax lot, the difference between the present market value of the security and a past

historical value of the security is calculated and compared to a predetermined tax loss

threshold. If the difference meets or exceeds the tax loss threshold, the security is

automatically sold to provide tax losses for offsetting gains in the portfolio"; col. 4, lines

31-67; col. 6, lines 4-30);

[Claim 7]   wherein the means for modeling a tax code is operative to provide

incremental tax costs resulting from the proposed transactions (col. 2, lines 46-65 – "For

each tax lot, the difference between the present market value of the security and a past

historical value of the security is calculated and compared to a predetermined tax loss

threshold. If the difference meets or exceeds the tax loss threshold, the security is

automatically sold to provide tax losses for offsetting gains in the portfolio"; col. 4, lines

31-67; col. 5, lines 10-57; col. 6, lines 4-30).

        Schulz discloses an apparatus allowing for tax-optimized, managed investment

portfolios, the apparatus comprising:

[Claim 8]   an investor account database storing account data for a plurality of

financial portfolios (col. 8, lines 18-61) wherein the assets of each financial portfolio are

allocated between at least two asset classes (col. 3, line 57 through col. 4, line 51; col.

5, lines 10-13 – Each investor has multiple accounts, some of which are utilized for tax

loss harvesting) and wherein each asset class has associated therewith at least one

investment style, each investment style representing a model portfolio (col. 3, line 57

through col. 4, line 51; col. 5, lines 10-13 – Each investor has multiple accounts, some

of which are utilized for tax loss harvesting; col. 2, lines 35-65; col. 4, lines 4-30; col. 5,

lines 31-49; col. 6, lines 4-14);

a data pre-processor for receiving (i) historical transactions associated with each

financial portfolio, and (ii) proposed transactions generated to mirror the model

portfolios (col. 2, lines 46-65; col. 4, lines 31-51; col. 5, lines 1-58); and

a portfolio optimizer operative to optimize a financial portfolio across the at least

two asset classes for after-tax returns, factoring in risk, return, and total tax costs, based

on the proposed transactions and the historical transactions associated with each

financial portfolio (col. 2, lines 46-65 – "For each tax lot, the difference between the

present market value of the security and a past historical value of the security is

calculated and compared to a predetermined tax loss threshold. If the difference meets

or exceeds the tax loss threshold, the security is automatically sold to provide tax losses

for offsetting gains in the portfolio"; col. 3, line 57 through col. 4, line 51; Diversification

and tax loss harvesting are utilized to maximize returns while minimizing tax loss, as

seen in col. 2, lines 12-25, 60-64 and col. 4, lines 23-30. Schulz explains in col. 1, lines

11-23 that diversification involves minimizing risk while pursuing returns);

[Claim 9]   wherein the portfolio optimizer is operative to minimize tracking error from

the model portfolios of the investment styles associated with the financial portfolio,

balancing tracking error, tax costs, and transaction costs (col. 5, lines 10-57; col. 6, lines

4-30);

[Claim 10]   wherein the portfolio optimizer is operative to minimize tracking error from

the model portfolios of the investment styles associated with the financial portfolio,

balancing tracking error, tax costs and tax preferences corresponding to the financial

portfolio (col. 5, lines 10-57; col. 6, lines 4-30);

[Claim 11]   wherein the model portfolio data comprises a plurality of securities and

their respective weights (col. 2, lines 35-65; col. 4, lines 4-30; col. 5, lines 31-49; col. 6,

lines 4-14);

[Claim 12]   wherein the investor account database further stores portfolio optimization

settings in association with corresponding financial portfolios, and wherein the portfolio

optimizer further considers the portfolio optimization settings when optimizing the

financial portfolio (col. 3, line 57 through col. 4, line 51; col. 5, lines 1-62; col. 6, lines 4-

40; col. 8, lines 18-61; Diversification and tax loss harvesting are utilized to maximize

returns while minimizing tax loss, as seen in col. 2, lines 12-25, 60-64 and col. 4, lines

23-30. Schulz explains in col. 1, lines 11-23 that diversification involves minimizing risk

while pursuing returns);

[Claim 13]   wherein the investor account database further stores client preference

data in association with corresponding financial portfolios, and wherein the portfolio

optimizer further considers the client preference data when optimizing the financial

portfolio (col. 3, line 57 through col. 4, line 51; col. 5, lines 1-62; col. 6, lines 4-40; col. 8,

lines 18-61; Diversification and tax loss harvesting are utilized to maximize returns while

minimizing tax loss, as seen in col. 2, lines 12-25, 60-64 and col. 4, lines 23-30. Schulz

explains in col. 1, lines 11-23 that diversification involves minimizing risk while pursuing

returns);

[Claim 19]   wherein the portfolio optimizer is further operative to receive data relating

to financial events external to the financial portfolio, and wherein the portfolio optimizer

integrates the external transactions data into the optimization of the financial portfolio

(col. 5, lines 1-14; col. 7, lines 41-57);

[Claim 25]   wherein the apparatus is operative to transmit calculated adjustments for a

financial portfolio to an accounting system for trade execution (col. 5, lines 1-62).

        Schulz discloses a method facilitating the maintenance of tax-optimized,

investment portfolios, the method comprising the steps of:

[Claim 26]   receiving investment style data representative of a plurality of investment

styles (col. 3, line 57 through col. 4, line 51; col. 5, lines 10-13 – Each investor has

multiple accounts, some of which are utilized for tax loss harvesting; col. 2, lines 35-65;

col. 4, lines 4-30; col. 5, lines 31-49; col. 6, lines 4-14);

receiving account data relating to a financial portfolio, wherein the assets of the

financial portfolio are allocated to at least one of the plurality of investment styles (col. 3,

line 57 through col. 4, line 51; col. 5, lines 10-13 – Each investor has multiple accounts,

some of which are utilized for tax loss harvesting);

receiving (i) historical transactions associated with each financial portfolio, and

(ii) proposed transactions based on the at least one investment style data (col. 2, lines

46-65; col. 4, lines 31-51; col. 5, lines 1-58); and,

optimizing the financial portfolio for after-tax returns, balancing risk, return and

total tax costs, based on the proposed transactions and the historical transactions

associated with each financial portfolio (col. 2, lines 46-65 – "For each tax lot, the

difference between the present market value of the security and a past historical value

of the security is calculated and compared to a predetermined tax loss threshold. If the

difference meets or exceeds the tax loss threshold, the security is automatically sold to

provide tax losses for offsetting gains in the portfolio"; col. 3, line 57 through col. 4, line

51; Diversification and tax loss harvesting are utilized to maximize returns while

minimizing tax loss, as seen in col. 2, lines 12-25, 60-64 and col. 4, lines 23-30. Schulz

explains in col. 1, lines 11-23 that diversification involves minimizing risk while pursuing

returns);

[Claim 27]   wherein the investment style data for investment style represents a model

portfolio (col. 2, lines 35-65; col. 4, lines 4-30; col. 5, lines 31-49; col. 6, lines 4-14);

[Claim 28]   wherein the optimizing step further comprises minimizing tracking error

from the model portfolios of the investment styles associated with the financial portfolio

(col. 5, lines 10-57; col. 6, lines 4-30);

[Claim 34]   further comprising incorporating data relating to financial events outside

the financial portfolio when calculating the net tax position of the client associated with

the financial portfolio (col. 5, lines 1-62).

        Schulz discloses a method facilitating the management of tax-optimized financial

portfolios allocated between at least two investment styles, the method comprises the

steps of:

[Claim 35]   maintaining a financial portfolio, wherein the assets of the financial

portfolio are allocated to at least two investment styles each having a model portfolio

associated therewith (col. 3, line 57 through col. 4, line 51; col. 5, lines 10-13 – Each

investor has multiple accounts, some of which are utilized for tax loss harvesting; col. 2,

lines 35-65; col. 4, lines 4-30; col. 5, lines 31-49; col. 6, lines 4-14);

        receiving (i) historical transactions associated with the financial portfolio, and (ii)

proposed transactions generated to mirror the model portfolios (col. 2, lines 46-65; col.

4, lines 31-51; col. 5, lines 1-58); and

        calculating adjustments to the financial portfolio, balancing risk, return and total

tax costs to minimize tracking error from the model portfolios (col. 2, lines 46-65 – "For

each tax lot, the difference between the present market value of the security and a past

historical value of the security is calculated and compared to a predetermined tax loss

threshold. If the difference meets or exceeds the tax loss threshold, the security is

automatically sold to provide tax losses for offsetting gains in the portfolio"; col. 5, lines

1-57; col. 6, lines 4-30).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Schulz et al. (U.S. Patent No. 6,687,681), as applied to claims 1, 8, 26, and 35 above, in

view of Peterson et al. (U.S. Patent No. 7,016,873).

[Claims 36, 38-40]   Schulz utilizes optimization software to rebalance portfolios

(columns 7-9), yet Schulz does not explicitly disclose that the portfolio optimizer

optimizes allocations of trades within each financial portfolio by constructing and solving

a mathematical representation of an objective function bound by constraints, wherein

the constraints represent the account data associated with each investment portfolio.

Peterson discloses a portfolio optimizer that optimizes allocations of trades within a

financial portfolio by constructing and solving a mathematical representation of an

objective function bound by constraints (col. 24, line 54 through col. 25, line 3; col. 35,

line 56 through col. 36, line 16). Peterson's optimization is performed for assessing

taxable and non-taxable effects on a portfolio (abstract; col. 25, lines 1-44) in order to

maximize after-tax portfolio returns for an acceptable risk tolerance (col. 2, lines 1-10).

The non-linear objective function facilitates manageable analysis of a greater number of

constraints within a flexible model (col. 25, lines 4-8, 25-35). Peterson's optimization

presents a common approach to the type of tax-related, multi-constraint portfolio

optimization discussed in Schulz; therefore, the Examiner submits that it would have

been obvious to one of ordinary skill in the art at the time of Applicant's invention to

modify Schulz such that the portfolio optimizer optimizes allocations of trades within

each financial portfolio by constructing and solving a mathematical representation of an

objective function bound by constraints, wherein the constraints represent the account

data associated with each investment portfolio in order to facilitate manageable analysis

of a greater number of constraints within a flexible model.

[Claim 37]   Schulz discloses that possible transactions are assessed as needed to

rebalance a portfolio (col. 2, lines 46-65 – "For each tax lot, the difference between the

present market value of the security and a past historical value of the security is

calculated and compared to a predetermined tax loss threshold. If the difference meets

or exceeds the tax loss threshold, the security is automatically sold to provide tax losses

for offsetting gains in the portfolio"), yet Schulz does not explicitly disclose that the

portfolio optimizer is further configured to modify the proposed transactions based on

the optimized allocations. Peterson recommends trades by taking into account potential

tax ramifications of actively effecting a particular transaction (col. 2, lines 1-10; col. 36,

lines 1-16), thereby implying that an investor has the option of acting upon a trade

recommendation or not. Both Schulz and Peterson facilitate dynamic portfolio

management based on tax implications; therefore, the Examiner submits that it would
have been obvious to one of ordinary skill in the art at the time of Applicant's invention
to modify Schulz such that the portfolio optimizer is further configured to modify the
proposed transactions based on the optimized allocations in order to present an
investor with transaction options (e.g., in the form of recommendations) that may be
acted upon with full knowledge of the likely tax ramifications that would result from
actively acting upon a particular recommendation.

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in
this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP
§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37
CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
the advisory action. In no event, however, will the statutory period for reply expire later
than SIX MONTHS from the date of this final action.

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-6733. The examiner can normally be reached on Monday-Friday, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on (571) 272-6702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susanna M. Diaz/
Primary Examiner, Art Unit 3692